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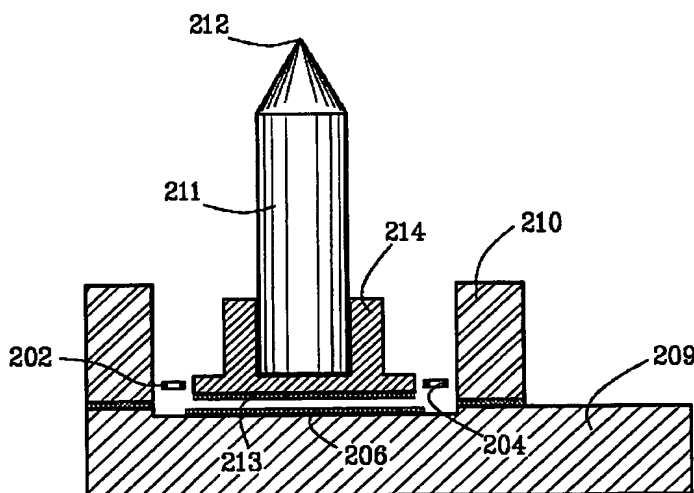
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(54) Title: MEMS NANOINDENTER



(57) Abstract: A force sensor (200) and nanoindentation system (300) using such force sensor (200), wherein the force sensor (200) comprise a movable membrane (207) attached to a fixed bulk structure (210) with springs (201, 202, 203, 204) formed between the membrane (207) and bulk structure (210); the springs (201, 202, 203, 204) may be provided two on each side of a rectangular membrane (207) and each in the form of a U-shape with displacing elements (801) formed perpendicular to each open end of each U-shaped spring (800). The force sensor further comprises electrodes (206) for detecting capacitive changes between the movable membrane (207) and the electrodes (206) in order to measure a movement in relation to an applied force. The membrane (207) further comprises a probe holding structure (214) for providing a solution for interchangeable probes (211).

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